

CLAIMS

1. A mobile terminal apparatus comprising:

a plurality of interfaces, each interface being capable of, when an associated access mechanism thereof is in an active state, obtaining a connection to a network using one of a home-address which is assigned to said interface in advance and a care-of-address which is assigned to said interface while said interface is in a domain where the home-address is not available;

an instructing section that instructs a setup of a binding of a home-address of a first interface of said plurality of interfaces, said first interface losing a connection obtained through a care-of-address of said first interface, and one of a home-address and a care-of-address of a second interface, of said plurality of interfaces; and

a setup section that sets up the binding.

2. A mobile terminal apparatus according to claim 1, wherein said instructing section comprises:

a detecting section that detects the loss of the connection obtained through the care-of-address of said first interface;

a searching section that, when the loss of the connection of said first interface is detected, searches for at least one interface whose associated access mechanism is in an active state from among said plurality of interfaces;

a selecting section selects, based on a predetermined

criterion, said second interface from among said at least one interface that has been searched;

a deciding section that decides whether or not the selected second interface is present in a domain where the
5 home-address of said second interface is available; and

a determining section that determines the home-address of said second interface is bound to the home-address of said first interface when said second interface is present in the domain where the home-address of said second interface is
10 available, and that determines the care-of-address of said second interface is bound to the home-address of said first interface when said second interface is not present in the domain where the home-address of said second interface is available, based on a result of the decision by said deciding
15 section.

3. A mobile terminal apparatus according to claim 1, wherein:

each of said plurality of interfaces predicts a loss
20 of a connection obtained through an assigned care-of-address; and

said instructing section comprises:

a searching section that, when the loss of the connection of said first interface is predicted by said
25 first interface, searches for at least one interface whose associated access mechanism is in an active state from among said plurality of interfaces;

a selecting section that selects, based on a predetermined criterion, said second interface from among said at least one interface that has been searched;

5 a deciding section that decides whether or not said selected second interface is present in a domain where the home-address of said second interface is available; and

10 a determining section that determines the home-address of said second interface is bound to the home-address of said first interface when said second interface is present in the domain where the home-address of said second interface is available, and that determines the care-of-address of said second interface is bound to the home-address of said first interface
15 when said second interface is not present in the domain where the home-address of said second interface is available, based on a result of the decision by said deciding section.

20 4. A mobile terminal apparatus according to claim 1, wherein said instructing section comprises:

a detecting section that detects the loss of the connection obtained through the care-of-address of said first interface;

25 a searching section that, when the loss of the connection of said first interface is detected, searches for at least one interface associated with an access mechanism of a

different type from an access mechanism associated with said first interface from among said plurality of interfaces;

a selecting section that selects, based on a predetermined criterion, said second interface from among said
5 at least one interface that has been searched;

an activating section that activates an access mechanism associated with said selected second interface;

a deciding section that decides whether or not said selected second interface whose associated access mechanism
10 is activated is present in a domain where the home-address of said second interface is available; and

a determining section that determines the home-address of said second interface is bound to the home-address of said first interface when said second interface is present in the
15 domain where the home-address of said second interface is available, and that determines the care-of-address of said second interface is bound to the home-address of said first interface when said second interface is not present in the domain where the home-address of said second interface is
20 available, based on a result of the decision by said deciding section.

5. A mobile terminal apparatus according to claim 1,
wherein each of said plurality of interfaces predicts
25 a loss of a connection obtained through an assigned care-of-address; and

wherein said instructing section comprises:

a searching section that, when the loss of the connection of said first interface is predicted by said first interface, searches for at least one interface associated with an access mechanism of a different type from an access mechanism associated with said first interface from among said plurality of interfaces;

a selecting section that selects, based on a predetermined criterion, said second interface from among said at least one interface that has been searched;

an activating section that activates an access mechanism associated with the selected second interface;

a deciding section that decides whether or not said selected second interface whose access mechanism is activated is present in a domain where the home-address of said second interface is available; and

a determining section that determines the home-address of said second interface is bound to the home-address of said first interface when said second interface is present in the domain where the home-address of said second interface is available, and determines the care-of-address of said second interface is bound to the home-address of said first interface when said second interface is not present in the domain where the home-address of said second interface is available, based on a result of the decision by said deciding section.

6. A handoff method in a mobile terminal apparatus having a plurality of interfaces, each interface being capable of, when an associated access mechanism thereof is in an active state, obtaining a connection to a network using one of a home-address which is assigned to said interface in advance and a care-of-address which is assigned to said interface while said interface is in a domain where the home-address is not available, the method comprising:
- 10 an instructing step for instructing a setup of a binding of a home-address of a first interface, said first interface losing a connection obtained through a care-of-address of said first interface, and one of said plurality of interfaces, and one of a home-address and a care-of-address of a second
- 15 interface of said plurality of interfaces; and
- a setup step for setting up said binding.